APHIS Form 29 and International Travel

The risks associated with international travel are influenced by characteristics of the traveler, including age, sex and health status, and by characteristics of the travel, including destination, purpose and duration of the trip. Forward planning, appropriate preventive measures and careful precautions can substantially reduce the risks of adverse health consequences. In this regard, the employee and the supervisor must assume the responsibility of asking for information, of understanding the risks involved, and of taking the necessary precautions for the journey and working with the Agency medical advisor and Federal Occupational Health (FOH).

APHIS Form 29

The APHIS Safety, Health, and Employee Wellness Branch manages the Occupational Medical Monitoring Program for the Agency. Through an interagency agreement with Federal Occupational Health (FOH), this program acts as the travel medicine clinic for the Agency, among its other functions. The APHIS Form 29 is available online (http://www.aphis.usda.gov/library/forms/pdf/aphis29.pdf) as a fillable PDF document. The employee and the supervisor should complete the Form, including the destination(s) and any potential exposures while on duty. When the employee lists the destination(s), they should be entered in order of the itinerary, with dates if possible. Also, try to include more than one telephone number where the employee can be reached. For a further demonstration on completing the Form 29 you may go to http://www.aphis.usda.gov/mrpbs/safety_security/library/aphis29.ppt. Once the APHIS Form 29 is completed and signed by both the employee and the supervisor, the Form is faxed to FOH at 415-437-8850. The document will be reviewed by the Medical Advisor from FOH. A work order will be generated from that office and sent to the field office and to the employee. The employee will be contacted to arrange an appointment to be seen in the nearest FOH clinic; there, any testing, vaccinations, or medications will be administered. Keep in mind that some vaccines and/or medications will need to be ordered and sent to the treating facility; this makes it imperative to plan early. This service is for Federal employees of APHIS only, and the service is at no charge to the employee's program. Through this program and the information in this document, we hope to lower or eliminate any risk to the employee undertaking an international mission as part of their job function.

Ideally, the initial consultation about travel abroad should occur at least **six weeks** before the APHIS employee's departure to allow time for booster immunizations and assessment of any adverse reactions. However, last-minute travel required of APHIS employees can also benefit from a medical consultation, even as late as the day before travel. This consultation will determine the need for any vaccinations and/or anti-malarial medication, as well as any other medical items that the employee may require. The pre-travel history includes documentation of all of the places the employee plans to visit, the time of year for the trip, the purpose of the visit and duration of stay. In addition, the employee's allergy history should be reviewed, as well as the vaccination history and past

medical history. Current diseases, medications and allergies influence vaccine indications and contraindications. Each piece of information assists in determining the relative risks and benefits of vaccines and medicines for the trip.

Background

Each year as many as 45 million Americans travel abroad, with about 20 million of them spending time in rural areas or developing countries, locations where the risks of contracting an illness are great. A study of travelers to developing countries and Eastern Europe revealed that more than one third had some type of illness during their trip. Diarrhea and the common cold were the most common illnesses. On a typical two-week trip, travelers lost an average of three days because of illness. Almost 20 percent of them remained ill after their return home, and 10 percent sought medical care for their illnesses. Cardiovascular disease is the most common cause of mortality in travelers. In one study of overseas fatalities among Americans, cardiovascular disease was the cause of more than one-half of the deaths; injuries accounted for almost one-quarter of the deaths.

People in their home environment live in a state of equilibrium with the locally occurring strains of microorganisms and with the altitude and climatic conditions of their home region. However, this is an unstable equilibrium that can be upset even in the home environment by factors such as the arrival of an unfamiliar microorganism, seasonal changes in climate and unusually stressful situations. The many physical and environmental changes encountered during international travel may upset this equilibrium to an even greater extent: sudden exposure to significant changes in altitude, humidity, microbial flora and temperature, exacerbated by stress and fatigue, may result in ill-health and an inability to achieve the purpose of the journey.

Job Hazard Assessment

There are several key factors to consider in determining the risks to which APHIS employees may be exposed; these include: destination, duration of the visit, purpose of the visit, standards of accommodations and food hygiene, and the behavior of the employee. Destinations where accommodation, hygiene and sanitation, medical care and water quality are of a high standard pose relatively few serious risks for the health of travelers, unless there is pre-existing illness. In contrast, destinations where accommodations are of poor quality, hygiene and sanitation are inadequate, medical services do not exist, and clean water is unavailable may pose serious risks for the health of travelers. This applies, for example, to personnel from emergency relief and development agencies or travelers who venture into remote areas. In these settings, stringent precautions must be taken to avoid illness. The duration of the visit and the behavior and lifestyle of the traveler are important in determining the likelihood of exposure to many infectious agents and will influence decisions on the need for certain vaccinations or anti-malarial medication. The duration of the visit may also determine whether the traveler may be subjected to marked changes in temperature and humidity during the visit, or to prolonged exposure to atmospheric pollution. The purpose of the

trip is critical in relation to the associated health risks. A trip to a city, where the visit is spent in a hotel and/or conference center of high standard involves fewer risks than a visit to remote rural areas. Behavior also plays an important role; for example, going outdoors in the evenings in a malaria-endemic area without taking precautions may result in the traveler becoming infected with malaria.

Routine immunizations such as tetanus/diphtheria and influenza should be updated and employees should be advised about preventing and treating minor illnesses, travelers' diarrhea and environmental exposures that carry a risk of infection. Routine dental and medical care should be updated before the trip. In addition, employees should be sure to have a sufficient supply of routinely taken medications. Employees should know what their medical insurance covers; they should know the procedures for medical evacuation if they become sick or are injured overseas.

Sufficient medical supplies should be carried to meet all foreseeable needs for the duration of the trip. A medical kit should be carried for all destinations where there may be significant health risks, particularly those in developing countries, and/or where the local availability of specific medications is not certain. This kit will include basic medicines to treat common ailments, i.e. aspirin, acetaminophen, or ibuprofen, first-aid articles, and any special medical items that may be needed by the employee. Certain categories of prescription medicine should be carried together with a medical certificate, signed by a physician, stating that the employee requires the medication for personal use. All medicines should be carried in the hand luggage to minimize any risk of loss during the journey. A duplicate supply carried in the checked luggage is a safety precaution in case of loss or theft. Toilet items should also be carried in sufficient quantity for the entire visit unless their availability at the travel destination is assured. These will include items for dental care, eye care including contact lenses, skin care, and personal hygiene.

Environmental Health Risks

Altitude

At high altitude, atmospheric pressure is reduced. The consequent reduction in oxygen pressure can lead to hypoxia (reduced supply of oxygen to the tissues). At altitudes of 1,500–3,500 meters (4,921–11,483 feet), exercise tolerance is reduced and ventilation is increased. At 3,500–5,500 meters (11,483–18,045 feet), there is hypoxia and altitude sickness may occur. Rapid ascent may lead to acute hypoxia: the affected person becomes faint and may lose consciousness. Acute mountain sickness may occur after1–6 hours at high altitudes. Headache is followed by anorexia, nausea and vomiting, and insomnia, fatigue, lassitude, and irritability. The outcome is fatal in some cases due to the development of pulmonary and cerebral edema. Employees with pre-existing cardiovascular or pulmonary disease or anemia are highly sensitive to changes in altitude, which can be dangerous and even life-threatening. The following precautions should be observed by employees unaccustomed to high altitude:

- Avoid direct travel to high altitudes if possible. Break the journey for 2–3 nights at 2,500–3,000 meters (8,202–9,842 feet) to help prevent acute mountain sickness.
- If direct travel to a high altitude cannot be avoided, the employee should avoid overexertion, large meals, and alcohol after arrival.
- Employees making a rapid ascent to high altitude (>3,000 meters) may be candidates for taking prophylactic medication.
- Employees planning to climb or trek at high altitude will require a period of gradual adaptation.
- Employees with pre-existing cardiovascular or pulmonary disease or anemia should seek medical advice before deciding to travel to high altitude.

Heat and Humidity

Sudden changes in temperature and humidity may have adverse effects on health. Exposure to high temperature and humidity results in loss of water and electrolytes (salts) and may lead to heat exhaustion and heat stroke. In hot dry conditions, dehydration is particularly likely to develop unless care is taken to maintain adequate fluid intake. Consumption of salt-containing food and drink helps to replenish the electrolytes in case of heat exhaustion and after excessive sweating. Older employees should take care to consume extra fluids in hot conditions, as the thirst reflex diminishes with age. Irritation of the skin may be experienced in hot conditions (prickly heat). Fungal skin infections such as athlete's foot are often aggravated by heat and humidity.

Ultraviolet Radiation from the Sun

The ultraviolet (UV) radiation from the sun includes UVA and UVB radiation, both of which are damaging to human skin and eyes. As you get closer to the equator the solar UV radiation index increases. UVB radiation is particularly intense in summer and in the 4-hour period around noon. UV radiation may penetrate clear water to a depth of 1 meter (3.3 feet) or more. The adverse effects of UV radiation from the sun are the following:

- Exposure to UV radiation, particularly UVB, can produce severe debilitating sunburn and sunstroke, particularly in light-skinned people.
- Exposure of the eyes may result in acute keratitis ("snow blindness"), and long-term damage leads to the development of cataracts.
- Long-term adverse effects on the skin include:
    - The development of skin cancers (carcinomas and malignant melanoma), mainly due to UVB radiation;
    - Accelerated aging of the skin, mainly due to UVA radiation, which penetrates more deeply into the skin.
- Adverse reactions of the skin result from interaction with a wide range of medications that may cause photosensitization and result in phototoxic or photoallergic dermatitis. A variety of different types of therapeutic drugs as well as oral contraceptives, some prophylactic anti-malarial drugs and certain antimicrobials may cause adverse skin reactions on exposure to sunlight.

Phototoxic contact reactions are caused by topical application of products, including perfumes, containing oil of bergamot or other citrus oils.
- Exposure may suppress the immune system, increase the risk of infectious disease, and limit the efficacy of vaccination.

The following are some precautions the employee should observe to avoid adverse effects from UV radiation:

- Avoid exposure to the sun in the middle of the day, when the UV intensity is greatest.
- Wear clothing that covers arms and legs (summer clothing is UV-protective and generally more effective than even good quality sunscreen).
- Wear UV-protective sunglasses of wrap-around design and wide-brimmed sun hat.
- Apply a broad-spectrum sunscreen of sun protection factor (SPF) 15+ liberally on areas of the body not protected by clothing and reapply frequently.
- Take precautions against excessive exposure on or in water.
- Check that medication being taken will not affect sensitivity to UV radiation.
- If adverse skin reactions have occurred previously, avoid any exposure to the sun and avoid any products that have previously caused the adverse reactions.

Accidents, Injuries, and Violence

Employees are more likely to be killed or injured in accidents or through violence than to be struck down by an exotic infectious disease. Traffic accidents and violence are significant risks in many countries, particularly developing countries, where skilled medical care may not be readily available. In many developing countries traffic laws are limited or are inadequately enforced. Often the traffic mix is more complex than that in developed countries and involves two- and four-wheeled vehicles, animal-drawn vehicles and other conveyances, plus pedestrians, all sharing the same road space. The roads may be poorly constructed and maintained, road signs and lighting inadequate and driving habits poor. Employees, both drivers and pedestrians, should be extremely attentive and careful on the roads. There are a number of practical precautions that employees can take to reduce the risk of being involved in, or becoming the victim of, a traffic accident:

- Obtain information on the regulations governing traffic and vehicle maintenance, and on the state of the roads, in the countries to be visited.
- Avoid driving at night.
- Before renting a car check the state of the tires, safety belts, spare tires, lights, brakes, etc.
- Know the informal rules of the road; in some countries, for example, it is customary to sound the horn or flash the headlights before passing.
- Be particularly vigilant in a country where the traffic drives on the opposite side of the road to that used in the United States.
- Do not drive on unfamiliar and unlit roads.
- Do not use a moped, motorcycle or bicycle.
- Do not drive after drinking alcohol.

- Drive within the speed limit at all times.
- Always wear a safety belt where these are available.
- Beware of wandering animals.

Violence is a significant risk in many developing countries. Criminals often target tourists and business travelers, particularly in countries where crime levels are high. However, some sensible precautions may reduce this risk:

- Be alert to muggings during the day as well as at night.
- Keep jewelry, cameras and other items of value out of sight and do not carry large sums of money on your person.
- Avoid isolated beaches and other remote areas.
- Avoid overcrowded trains, buses and minibus taxis.
- Use authorized taxis only.
- Avoid driving at night and never travel alone.
- Keep car doors locked and windows shut.
- Be particularly alert when waiting at traffic lights.
- Park in well-lit areas and do not pick up strangers.
- Employ the services of a local guide/interpreter or local driver when traveling to remote areas.
- Vehicle hijacking is a recognized risk in a number of countries. If stopped by armed robbers, make no attempt to resist and keep hands where the attackers can see them at all times.

Infectious Diseases of Potential Risk to Employees

Depending on the travel destination, employees may be exposed to a number of infectious diseases; exposure depends on the presence of infectious agents in the area to be visited. The risk of becoming infected will vary according to the purpose of the trip and the itinerary within the area, the standards of accommodation, hygiene and sanitation, as well as the behavior of the traveler. In some instances, disease can be prevented by vaccination, but there are some infectious diseases, including some of the most important and most dangerous, for which no vaccines exist. General precautions can greatly reduce the risk of exposure to infectious agents and should always be taken for visits to any destination where there is a significant risk of exposure. These precautions should be taken regardless of whether any vaccinations or medication have been administered. The modes of transmission for different infectious diseases and the corresponding general precautions are outlined in the following paragraphs.

Foodborne and Waterborne Diseases

Food- and waterborne diseases are transmitted by consumption of contaminated food and drink. The risk of infection is reduced by taking hygienic precautions with all food, drink and drinking water consumed when traveling and by avoiding direct contact with polluted recreational waters. Although the standard precaution of “boil it, cook it, peel it or forget it” seems logical, adopting this practice during travel abroad has not been proved to

reduce the incidence of travelers' diarrhea. Examples of diseases transmitted by food and water are travelers' diarrhea, hepatitis A, typhoid fever and cholera.

Vector-borne Diseases

Many travel-related illnesses, such as malaria, yellow fever, tick-borne encephalitis and dengue fever, have insect or tick vectors. Diethyltoluamide (DEET) containing insect repellents are the most effective deterrents. The DEET concentration alone may not predict toxicity, but a standard maximum concentration of 10% for children and 30% for adults usually provides hours of safe protection without toxicity. Insect repellents should be applied only to exposed skin and, to reduce side effects, should be washed off as soon as possible after exposure to insects ceases. Permethrin-coated clothing and bed nets provide additional protection against insects. Applying a sunscreen 30 minutes before the insect repellent is applied maintains sunscreen effectiveness.

Zoonoses

Zoonoses (diseases transmitted from animals) include many infections that can be transmitted to humans through animal bites or contact with contaminated bodily fluids or feces from animals, or by consumption of foods of animal origin, particularly meat and milk products. The risk of infection can be reduced by avoiding close contact with any animal, including wild, captive and domestic animals, in places where infection is likely to be present. Particular care should be taken to prevent children from approaching and handling animals. Examples of zoonoses are rabies, brucellosis, leptospirosis, and certain viral hemorrhagic fevers.

Sexually Transmitted Diseases

Sexually transmitted diseases are passed from person to person through unsafe sexual practices. The risk of infection can be reduced by avoiding casual and unprotected sexual intercourse, and the use of condoms. Despite the global rise of HIV infection, studies suggest a low rate of condom use among travelers and general ignorance of the risk of HIV infection in foreign countries. One survey documented a 15% rate of sexually transmitted diseases in travelers on their return home. Examples of sexually transmitted diseases are hepatitis B, HIV/AIDS, and syphilis.

Airborne Diseases

Airborne diseases are transmitted from person to person by aerosol and droplets from the nose and mouth. The risk of infection can be reduced by avoiding close contact with people in crowded and enclosed places. Examples of airborne diseases are influenza, meningococcal meningitis, and tuberculosis.

Diseases Transmitted from Soil

Soil-transmitted diseases include those caused by dormant forms (spores) of infectious agents, which can cause infection by contact with broken skin (minor cuts, scratches, etc.). The risk of infection can be reduced by protecting the skin from direct contact with soil in places where soil-transmitted infections are likely to be present. Examples of bacterial diseases transmitted from soil are anthrax and tetanus. Certain intestinal parasitic infections, such as ascariasis and tirchuriasis, are transmitted via soil and infection may result from consumption of soil-contaminated vegetables.

Vaccine-preventable Diseases, Vaccines, and Vaccination

Vaccination is the administration of a vaccine to stimulate a protective immune response that will prevent disease in the vaccinated person if contact with the corresponding infectious agent occurs subsequently. Thus vaccination, if successful, results in immunization: the vaccinated person had been immunized. In practice, the terms "vaccination" and "immunization" are often used interchangeably.

Vaccination is a highly effective method of preventing certain infectious diseases. For the individual, and the society in terms of public health, prevention is better and more cost-effective than cure. Vaccines are generally very safe and adverse reactions are uncommon. For employees, vaccination offers the possibility of avoiding a number of dangerous infections that may be encountered abroad. However, vaccines have not been developed against several of the most life-threatening infections, including malaria and HIV/AIDS.

Despite their success in preventing disease, vaccines do not fully protect 100% of the recipients. The vaccinated employee should not assume that there is no risk of catching the disease(s) against which the employee has been vaccinated. All additional precautions against infection should be followed carefully, regardless of any vaccines or other medication that have been administered. These same precautions are important in reducing the risk of acquiring diseases for which no vaccine exist.

The protective effect of vaccines takes some time to develop following vaccination. The immune response of the vaccinated employee will become fully effective within a period of time that varies according to the vaccine, the number of doses required, and whether the employee has previously been vaccinated against the same disease. For this reason, employees are advised to consult with a medical professional 4–6 weeks prior to departure if the travel destination is one where exposure to any vaccine-preventable diseases may occur.